

Amendments to the Claims

1. (Original) A method for providing a halftoned image comprising the step of:
scaling the halftoned image by performing pel repetition utilizing an error diffusion algorithm such that artifacts are minimized.
2. (Original) The method of claim 1 wherein $n \times m$ pel blocks of an image are scaled to $n+1 \times m$ pel blocks by inserting single pels in each block at locations distributed through the block according to the error-diffusion algorithm, with values chosen such that the average intensity of the block is substantially unchanged.
3. (Original) The method of claim 1 wherein no pel from a $n \times m$ pel block is shifted more than one position from its neighboring pels in the scaled $(n+1 \times m)$ block.
4. (Original) The method of claim 3 wherein the $n \times m$ pel block is shifted by a shifting matrix.
5. (Original) The method of claim 2 wherein a threshold matrix is utilized to maintain the average intensity of a block.
6. (Original) A printing system for providing a halftoned image comprising:
 - a storage device for providing a continuous tone (contone) image;
 - a spooler for receiving the contone image and converting the image to a halftoned image;
 - a scaler for scaling the halftoned image by performing pel repetition utilizing an error diffusion algorithm such that artifacts are minimized; and
 - a printer for receiving the halftoned image and printing the image.
7. (Original) The system of claim 6 wherein the scaler is within the printer.
8. (Original) The system of claim 6 wherein $n \times m$ pel blocks of an image are scaled to $n+1 \times m$ pel blocks by inserting single pels in each block at locations distributed through the block according to the error-diffusion algorithm, with values chosen such that the average intensity of the block is substantially unchanged.

9. (Original) The system of claim 6 wherein no pel from a $n \times m$ pel block is shifted more than one position from its neighboring pels in the scaled $(n+1 \times m)$ block.

10. (Original) The system of claim 9 wherein the $n \times m$ pel block is shifted by a shifting matrix.

11. (Original) The system of claim 8 wherein a threshold matrix is utilized to maintain the average intensity of a block.

12. (Original) A computer readable medium containing program instructions for providing a halftoned image, the program instructions for:

scaling the halftoned image by performing pel repetition utilizing an error diffusion algorithm such that artifacts are minimized.

13. (Original) The computer readable medium of claim 12 wherein $n \times m$ pel blocks of an image are scaled to $n+1 \times m$ pel blocks by inserting single pels in each block at locations distributed through the block according to the error-diffusion algorithm, with values chosen such that the average intensity of the block is substantially unchanged.

14. (Original) The computer readable medium of claim 12 wherein no pel from a $n \times m$ pel block is shifted more than one position from its neighboring pels in the scaled $(n+1 \times m)$ block.

15. (Original) The computer readable medium of claim 14 wherein the $n \times m$ pel block is shifted by a shifting matrix.

16. (Original) The computer readable medium of claim 13 wherein a threshold matrix is utilized to maintain the average intensity of a block.